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PATENT ABSTRACTS OF JAPAN

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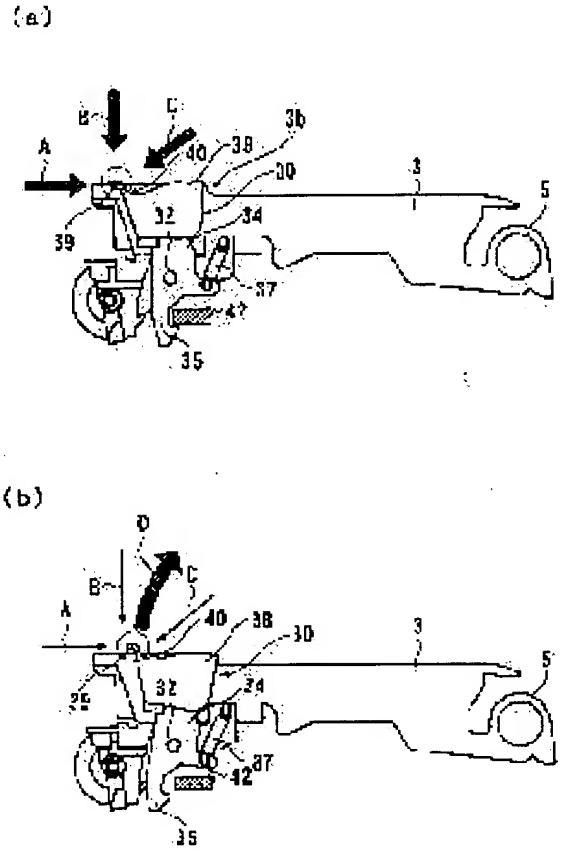
(54) PRINTER

(57)Abstract:
PROBLEM TO BE SOLVED: To provide a printer wherein a roll paper cover can be smoothly opened even when a printer is placed in a vertical or horizontal attitude.
SOLUTION: This printer 1 comprises a body case (2) wherein printing is performed on a recording paper drawn from a roll paper provided in a roll paper holder (4), a roll paper cover 3 which is provided rotatably around a hinge of the body case (2) and a release lever mechanism 30 that engages the roll paper cover 3 with the



printer body (2). The release lever mechanism 30 has a release lever 38 and engagement pawls 33, 34 which can be integrally moved along with the release lever 38. The release lever 38 is formed to be rotatable around a lever pivot 32 which is roughly parallel to a straight line as a rotational center of the hinge 5 of the roll paper cover 3 and the engagement pawls 33, 34 are formed to be engaged with a part of the body case (2).

LEGAL STATUS

[Date of request for examination]

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* NOTICES *

CLAIMS

[Claim(s)]
[Claim 1] The printer characterized by providing the following. The main part of a printer constituted so that it might print on the recording paper pulled out from the roll sheet, while being constituted possible [hold of a roll sheet] Roll-sheet covering formed in this main part of a printer free [rotation] focusing on the pivot The release lever mechanism constituted so that engagement on the aforementioned roll-sheet covering and the aforementioned main part of a printer might be canceled, when it was the mechanism with which the aforementioned roll-sheet covering and the aforementioned main part of a printer are made to engage, it had the release lever section prepared in this roll-sheet covering and this release lever section moved to the pivot side of the aforementioned roll-sheet covering
[Claim 2] The release lever section of the aforementioned release lever mechanism is a printer according to claim 1 characterized by being arranged after the aforementioned knob section has been exposed to the predetermined crevice which was formed so that it might be prolonged in the predetermined direction, and which gathers, has the section and was prepared in the aforementioned roll-sheet covering.
[Claim 3] The aforementioned release lever mechanism is the printer of two the claim 1 characterized by the aforementioned engagement claw part being constituted by some aforementioned main parts of a printer, and engagement while having the engagement claw part which can be interlocked with the aforementioned release lever section in one and constituting the aforementioned release lever section free [rotation] focusing on a pivot almost parallel to the opening-and-closing pivot of the aforementioned roll-sheet covering, or given in any 1 term.

[Translation done.]

* NOTICES *

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the printer which can choose an installation mode as either of every length and every width especially about the printer which prints to a roll sheet.
[0002]
[Description of the Prior Art] Generally, in this kind of printer, the roll sheet with which it was loaded into the main part of a printer is prepared free [rotation of roll-sheet covering] the wrap sake.
[0003] By being constituted possible [the main part of a printer and engagement], moving a push button in the direction which intersects perpendicularly with roll-sheet covering mostly, and operating a cam mechanism by the cam mechanism, engagement on the main part of a printer cancels this roll-sheet covering, and it is opened.
[0004]
[Problem(s) to be Solved by the Invention] By the way, in case the structure top roll-sheet covering is opened, in order to operate a cam mechanism, such no conventional printer pushes a push button by the remarkable force, and if there is, it does not have an oak.
[0005] For this reason, although it was satisfactory when a printer was carried out every width, when a printer was carried out every length with the conventional technology, since it was mostly turned to parallel to the installation side of a printer, for making it transmit the depression force of a push button to a cam mechanism, the push button seldom pushed the force which carries out the depression of the push button, and when pushing a push button, moreover, the problem that where of the printer itself will move had it.
[0006] the place which it was made in order that this invention might solve the

technical problem of such a Prior art, and is made into the purpose offers the printer which can open roll-sheet covering smoothly, even when a printer is installed in every length and which mode of every width -- it is in things
[0007]
[Means for Solving the Problem] this invention made in order to attain the above-mentioned purpose The main part of a printer constituted so that it might print on the recording paper pulled out from the roll sheet, while being constituted possible [hold of a roll sheet], Roll-sheet covering formed in the main part of a printer free [rotation] focusing on the pivot, Are the mechanism with which roll-sheet covering and the main part of a printer are made to engage, and it has the release lever section prepared in roll-sheet covering. When the release lever section moves to the pivot side of roll-sheet covering, it is the printer characterized by having the release lever mechanism constituted so that engagement on roll-sheet covering and the main part of a printer might be canceled.
[0008] Since engagement on the main part of a printer canceled the release lever section of a release lever mechanism by moving to the pivot side of roll-sheet covering according to this invention, Roll-sheet covering can be opened easily, without transmitting the force applied to the release lever as the moment required opening roll-sheet covering, and needing the more nearly excessive force than it, if operation of the release lever section is continued as it is. And since the force which the release lever section operates is not transmitted to the main part side of a printer, in case roll-sheet covering is opened, it can prevent that the printer itself moves.
[0009] Therefore, according to this invention, since the release lever section of a release lever mechanism can be easily operated irrespective of the installation mode of a printer, the printer which can open roll-sheet covering smoothly can be obtained.
[0010] Moreover, the release lever section of this invention of a release lever mechanism is [being arranged after having gathered, having the section, gathering to the predetermined crevice which was formed so that it might be prolonged in the predetermined direction and which was prepared in roll-sheet covering and the section's having been exposed] also effective.
[0011] Since the knob section of the release lever section is exposed from roll-sheet covering and it enabled it to hold even from the direction of a gap according to this invention, even if it is any at the time of installing a printer every length and every width, the release lever section can be operated easily.
[0012] Furthermore, in this invention, as for a release lever mechanism, it is also effective that the engagement claw part is constituted by some main parts of a

printer and engagement while having the engagement claw part which can be interlocked with the release lever section in one and constituting the release lever section free [rotation] focusing on a pivot almost parallel to the opening-and-closing pivot of roll-sheet covering.
[0013] Since according to this invention an engagement claw part rotates in one with the release lever section and canceled engagement on the main part of a printer, it can be made in agreement in the direction in which roll-sheet covering opens the direction to which the release lever section moves.
[0014]
[Embodiments of the Invention] Hereafter, the gestalt of desirable operation of the printer concerning this invention is explained in detail with reference to a drawing.
[0015] Drawing 1 is the perspective diagram showing the outline composition in the state where roll-sheet covering closed about the appearance of the printer of the gestalt of this operation. Drawing 2 is the perspective diagram showing the outline composition in the state where roll-sheet covering opened about the appearance of this printer. Drawing 3 is the side elevation showing the internal configuration in the state where roll-sheet covering of this printer opened. Drawing 4 is the perspective diagram showing roll-sheet covering of the gestalt of this operation, and the outline composition of a release lever mechanism.
[0016] The side elevation in which the side elevation in which drawing 5 (a) shows the outline composition of this roll-sheet covering, and drawing 5 (b) show the outline composition of this release lever mechanism, and drawing 5 (c) are the side elevations showing a part of this roll-sheet covering and outline composition of a release lever mechanism. Drawing 6 (a) and (b) are drawings for explaining an operation of this roll-sheet covering and a release lever mechanism.

[0017] As shown in drawing 1 and drawing 2 , the printer 1 of the gestalt of this operation has the main part case (some main parts of a printer) 2 where it has opening, and the roll-sheet covering 3 of the size which plugs up the opening. The main part case 2 and the roll-sheet covering 3 are formed in a configuration which turns into abbreviation box-like in one using the resin, respectively. That is, while the main part case 2 is formed in the shape of an abbreviation rectangular parallelepiped from a rectangle-like pars basilaris ossis occipitalis and the wall prepared so that this pars basilaris ossis occipitalis might be surrounded, the roll-sheet covering 3 is formed in plate-like [rectangular].
[0018] The printer 1 of the gestalt of this operation here can choose every length and one installation mode of every width, and the printer 1 of drawing 1 shows

the thing in the state where it carried out every width. And set a printer 1 to the 1st pars-basilaris-ossis-occipitalis 2a at the time of carrying out every width, and the pars basilaris ossis occipitalis of the main part case 2 mentioned above is set in this state. The wall by the side of the front of the main part case 2 (method side of the diagonal below of drawing 1) is set to front section 2b among the walls of the main part case 2, and the wall by the side of the back of the main part case 2 is set to the 2nd pars-basilaris-ossis-occipitalis 2c at the time of carrying out a printer 1 every length. Furthermore, in this state, the wall of the bottom which makes the same field as the roll-sheet covering 3 closed by being connected from front section 2b of the main part case 2 is made into 2d of panel sections, and the wall on the right-hand side of the main part case 2 (slanting upper part right-hand side of drawing 1) is set to 1st side-attachment-wall section 2e, and let the wall on the left-hand side of the main part case 2 be 2f of 2nd side-attachment-wall section. In the following publications, it considers as the vertical direction and cross direction of a printer 1 on the basis of the case where 1st pars-basilaris-ossis-occipitalis 2a of the main part case 2 is turned down.

[0019] As shown in drawing 2 or drawing 3 , the roll-sheet electrode holder 4 which can hold a roll sheet (not shown) is formed in the interior of the main part case 2. The roll-sheet electrode holder 4 is formed in abbreviation box-like from plate-like flank 4b of a couple on both sides of curved-surface-like pars-basilaris-ossis-occipitalis 4a and its pars-basilaris-ossis-occipitalis 4a.

[0020] As shown in drawing 4 , bearing 3a is formed in a part for the both ends by the side of 2nd [of the main part case 2] pars-basilaris-ossis-occipitalis 2c among the periphery portions of the roll-sheet covering 3, respectively. And bearing 3a of the roll-sheet covering 3 is the both sides, and constitutes the hinge 5 of the roll-sheet covering 3 with bearing by the side of the roll-sheet electrode holder 4 which is not illustrated and the main part case 2. Thereby, the roll-sheet covering 3 is supported by the main part case 2 free [opening and closing].

[0021] As shown in drawing 3 , the thermal head 11 which prints with a sensible-heat method is formed in the part between front section 2b of the main part case 2, and the roll-sheet electrode holder 4 among the portions within the main part case 2. On the other hand, inside [for a point] the roll-sheet covering 3, the platen roller 12 is formed free [rotation]. And when the roll-sheet covering 3 is closed, the printing mechanism 13 which consists of a thermal head 11 and a platen roller 12 is constituted so that it may rotate, while a platen roller 12 contacts a thermal head 11.

[0022] The movable edge unit 15 which has the movable edge which is not illustrated is formed in the upper part part near the thermal head 11 among the

portions of the main part case 2 inside. On the other hand, inside [for a point] the roll-sheet covering 3, the stationary knife 16 is formed, and when the roll-sheet covering 3 is closed, the auto-cutter style 17 which consists of a movable edge unit 15 and a stationary knife 16 is constituted so that a movable edge may slide on a stationary-knife 16 top.

[0023] As shown in drawing 1 or drawing 3 , the 1st notch 18 for paper eccrisis is formed in a part for the nose-of-cam marginal part of 2d of panel sections of the main part case 2. On the other hand, the 2nd notch 19 for paper eccrisis is formed in a part for the nose-of-cam marginal part of the roll-sheet covering 3. And when the roll-sheet covering 3 is closed, the paper exhaust port 20 is formed in one from the 1st notch 18 for paper eccrisis, and the 2nd notch 19 for paper eccrisis, and this paper exhaust port 20 is pulled out from the roll sheet in the roll-sheet electrode holder 4, and it is arranged so that the recording paper which goes via a printing mechanism 13 and the auto-cutter style 17 can be discharged.

[0024] On the other hand, as shown in drawing 3 , the release lever mechanism 30 is formed inside [for a point] the roll-sheet covering 3. In addition, in the gestalt of this operation, the release lever mechanism 30 is unit-ized with the platen roller 12 and stationary knife 16 which were mentioned above.

[0025] As shown in drawing 4 or drawing 5 (b), the release lever mechanism 30 has the frame 31 formed in the shape of an abbreviation rectangular parallelepiped. The lever pivot 32 is supported free [rotation] by this frame 31, after the amount of point has overflowed the both-sides section of a frame 31. This lever pivot 32 is arranged so that it may become the direction of the axis of rotation of the hinge 5 of the roll-sheet covering 3, and parallel. The engagement presser foot stitch tongues 33 and 34 are formed in the portion which overflowed the frame 31 of the lever pivot 32, respectively. These engagement presser foot stitch tongues 33 and 34 are formed in the shape of ****, and they are parts for the abbreviation center section, and they are being fixed to the lever pivot 32 so that each engagement presser foot stitch tongues 33 and 34 may maintain the same posture.

[0026] As shown in drawing 5 (b) and (c), it is under surface (main part case side) than the lever pivot 32 among the portions of each engagement presser foot stitch tongues 33 and 34, and the hook section 35 of a predetermined configuration is formed in the configuration in which the part 42 by the side of the main part case 2 and engagement are possible at the portion by the side of the hinge 5 of the roll-sheet covering 3.

[0027] Moreover, near the hook section 35 of each engagement presser foot stitch tongues 33 and 34, the attachment section 36 is formed and the extension spring

37 is attached between this attachment section 36 and frame 31.
[0028] Furthermore, as shown in drawing 4 , the release lever 38 is being fixed to the engagement presser foot stitch tongue 34 of one side (near side of drawing 4) among these engagement presser foot stitch tongues 33 and 34. This release lever 38 is formed in the shape of an abbreviation block in a predetermined size, and is arranged on both sides of the lever pivot 32 at a part for the edge of the hook section 35 and an opposite side.
[0029] The knob section 39 is prolonged and formed in the direction which overflows a part for this soma of a release lever 38 a little among the upper parts of a release lever 38 at the portion by the side of the nose of cam of the roll-sheet covering 3. Moreover, it is formed in the upper surface of a release lever 38 so that the impression section 40 of the shape of a predetermined concave curved surface may gather and it may be connected with the section 39.
[0030] on the other hand -- the side of the 2nd notch 19 for paper eccrisis of the roll-sheet covering 3 -- the portion by the side of 1st [of the main part case 2 among portions] side-attachment-wall section 2e -- the object for levers -- the hole (crevice) 41 is formed in the larger size a little than the appearance of a release lever 38 this object for levers -- convex-surface-like convex knob section 3b is formed in the portion by the side of 2nd [of the main part case 2] pars-basilaris-ossis-occipitalis 2c among the periphery portions of a hole
[0031] This release lever mechanism 30 and by attaching the frame 31 inside the 2nd notch 19 for paper eccrisis of the roll-sheet covering 3 a release lever 38 -- the object for the levers of the roll-sheet covering 3, as it is arranged at a hole 41 and shown in drawing 5 (c) in this case a part of top containing the knob section 39 and the impression section 40 of a release lever 38 -- the object for the levers of the roll-sheet covering 3 -- it exposes and becomes depressed from a hole 41, and the section 40 approaches with convex knob section 3b
[0032] In the gestalt of this operation which has this composition In opening the roll-sheet covering 3 in the case of exchanging roll sheets etc. as shown in drawing 1 or drawing 6 (a) for example Since convex knob section 3b of the roll-sheet covering 3 has projected while the knob section 39 of a release lever 38 is exposed from the roll-sheet covering 3, The knob section 39 of a release lever 38 is gathered by attaching a finger to the knob section 39 of a release lever 38, or attaching the finger of further others to convex knob section 3b of the impression section 40 of a release lever 38, or the roll-sheet covering 3 in this state from the direction of either of the arrows A, B, and C shown in drawing.
[0033] And if the knob section 39 of a release lever 38 is rotated in the direction of arrow D focusing on the lever pivot 32 as shown in drawing 6 (b) Since

engagement to the hook section 35 of the engagement presser foot stitch tongues 33 and 34 and the part 42 by the side of the main part case 2 is canceled when the engagement presser foot stitch tongues 33 and 34 move in one with a release lever 38, as it is, the knob section 39 of a release lever 38 is moved in the direction of arrow D, and the roll-sheet covering 3 is opened focusing on a hinge 5. In this case, the force applied to a release lever 38 is transmitted to direct roll-sheet covering 3 the very thing as the moment required to open the roll-sheet covering 3, and is not transmitted to the main part case 2 side.

[0034] Since it changed into the state of opening the roll-sheet covering 3 only by moving a release lever 38 to the hinge 5 side of the roll-sheet covering 3 according to the gestalt of this operation as stated above, by continuing operation of a release lever 38 as it is Furthermore, since the force which a release lever 38 operates moreover is not transmitted to the main part case 2 side, in case it can open the roll-sheet covering 3 easily, without needing the excessive force in case the roll-sheet covering 3 is opened, and the roll-sheet covering 3 is opened, it can prevent that printer 1 the very thing moves.

[0035] Especially, according to the gestalt of this operation, it enables it to hold the knob section 39 of a release lever 38 from any direction, and since the direction to which the knob section 39 moves, and the direction which the roll-sheet covering 3 opens were made in agreement, even if printers 1 are every width and which installation mode of every length, the roll-sheet covering 3 can be opened smoothly.

[0036] For example, if it is when a printer 1 is carried out every width and the front section 2b is made into an operator's transverse-plane side, as shown in drawing 1 , the roll-sheet covering 3 can be opened only by attaching arrow C to an index finger for arrow A to the thumb to convex knob section 3b of the knob section 39 of a release lever 38, or the roll-sheet covering 3, lengthening to a back side, and raising the knob section 39 of a release lever 38 as it is.

[0037] Moreover, if it is when a printer 1 is carried out every length and the roll-sheet covering 3 and 2d of panel sections are made into an operator's transverse-plane side From B an index finger into the top portion of the knob section 39 of a release lever 38 [Arrow A or] The self-weight of the roll-sheet covering 3 can open the roll-sheet covering 3 after that only by attaching the thumb to convex knob section 3b of the bottom portion of the knob section 39 of a release lever 38, or the roll-sheet covering 3 from arrow C, respectively, and lengthening to the down side.

[0038] In addition, this invention can make various change, without being restricted to the gestalt of above-mentioned operation.

[0039] For example, although the mechanism in which rotation of the

engagement presser foot stitch tongues 33 and 34 united with the release lever 38 canceled the engagement by the side of the main part case 2 was used for the release lever mechanism 30 in the gestalt of the above-mentioned implementation, this invention can also apply other mechanisms, if it doubles in the direction in which the roll-sheet covering 3 opens the direction to which it is not restricted to this but a release lever 38 moves. But like the gestalt of the above-mentioned implementation, in depending the breaker style of the roll-sheet covering 3 on a rotary system, there is an advantage of being easy to double in the direction in which roll-sheet covering opens the direction to which a release lever moves, by depending the release lever mechanism 30 on a rotary system.
[0040] Moreover, in the gestalt of the above-mentioned implementation, although what is depended on a thermal head 11 as a printing method was used, this invention is not restricted to this but what is depended on a dot impact method or an ink-jet method can also be used for it. However, it is desirable to use a thermal head 11 from a viewpoint of enabling every length and installation of a printer 1 to all of every width.
[0041]
[Effect of the Invention] Like, according to this invention, by [which were described above] moving a release lever to the pivot side of roll-sheet covering, and continuing the operation as it is, in case roll-sheet covering can be opened easily and roll-sheet covering is moreover opened, it can prevent the printer itself moving.
[0042] Moreover, according to this invention, it enables it to gather a release lever from any direction, and even if printers are every width and which installation mode of every length by having made in agreement the direction to which the knob section moves, and the direction which roll-sheet covering opens, roll-sheet covering can be opened smoothly.

[Translation done.]

* NOTICES *

TECHNICAL FIELD

[The technical field to which invention belongs] this invention relates to the printer which can choose an installation mode as either of every length and every width especially about the printer which prints to a roll sheet.

[Translation done.]

* NOTICES *

PRIOR ART

[Description of the Prior Art] Generally, in this kind of printer, the roll sheet with which it was loaded into the main part of a printer is prepared free [rotation of roll-sheet covering] the wrap sake.
[0003] By being constituted possible [the main part of a printer and engagement], moving a push button in the direction which intersects perpendicularly with roll-sheet covering mostly, and operating a cam mechanism by the cam mechanism, engagement on the main part of a printer cancels this roll-sheet covering, and it is opened.

[Translation done.]

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3.In the drawings, any words are not translated.

EFFECT OF THE INVENTION

[Effect of the Invention] Like, according to this invention, by [which were described above] moving a release lever to the pivot side of roll-sheet covering, and continuing the operation as it is, in case roll-sheet covering can be opened easily and roll-sheet covering is moreover opened, it can prevent the printer itself moving.
[0042] Moreover, according to this invention, it enables it to gather a release lever from any direction, and even if printers are every width and which installation mode of every length by having made in agreement the direction to which the knob section moves, and the direction which roll-sheet covering opens, roll-sheet covering can be opened smoothly.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] By the way, in case the structure top roll-sheet covering is opened, in order to operate a cam mechanism, such no conventional printer pushes a push button by the remarkable force, and if there is, it does not have an oak.
[0005] For this reason, although it was satisfactory when a printer was carried out every width, when a printer was carried out every length with the conventional technology, since it was mostly turned to parallel to the installation side of a printer, for making it transmit the depression force of a push button to a cam mechanism, the push button seldom pushed the force which carries out the depression of the push button, and when pushing a push button, moreover, the problem that where of the printer itself will move had it.
[0006] the place which it was made in order that this invention might solve the technical problem of such a Prior art, and is made into the purpose offers the printer which can open roll-sheet covering smoothly, even when a printer is installed in every length and which mode of every width -- it is in things

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[Translation done.]

* NOTICES *

MEANS

[Means for Solving the Problem] this invention made in order to attain the above-mentioned purpose The main part of a printer constituted so that it might print on the recording paper pulled out from the roll sheet, while being constituted possible [hold of a roll sheet], Roll-sheet covering formed in the main part of a printer free [rotation] focusing on the pivot, Are the mechanism with which roll-sheet covering and the main part of a printer are made to engage, and it has the release lever section prepared in roll-sheet covering. When the release lever section moves to the pivot side of roll-sheet covering, it is the printer characterized by having the release lever mechanism constituted so that engagement on roll-sheet covering and the main part of a printer might be canceled.

[0008] Since engagement on the main part of a printer canceled the release lever section of a release lever mechanism by moving to the pivot side of roll-sheet covering according to this invention, Roll-sheet covering can be opened easily, without transmitting the force applied to the release lever as the moment required opening roll-sheet covering, and needing the more nearly excessive force than it, if operation of the release lever section is continued as it is. And since the force which the release lever section operates is not transmitted to the main part side of a printer, in case roll-sheet covering is opened, it can prevent that the printer itself moves.

[0009] Therefore, according to this invention, since the release lever section of a release lever mechanism can be easily operated irrespective of the installation mode of a printer, the printer which can open roll-sheet covering smoothly can be obtained.

[0010] Moreover, the release lever section of this invention of a release lever mechanism is [being arranged after having gathered, having the section, gathering to the predetermined crevice which was formed so that it might be

prolonged in the predetermined direction and which was prepared in roll-sheet covering and the section's having been exposed] also effective.
[0011] Since the knob section of the release lever section is exposed from roll-sheet covering and it enabled it to hold even from the direction of a gap according to this invention, even if it is any at the time of installing a printer every length and every width, the release lever section can be operated easily.
[0012] Furthermore, in this invention, as for a release lever mechanism, it is also effective that the engagement claw part is constituted by some main parts of a printer and engagement while having the engagement claw part which can be interlocked with the release lever section in one and constituting the release lever section free [rotation] focusing on a pivot almost parallel to the opening-and-closing pivot of roll-sheet covering.
[0013] Since according to this invention an engagement claw part rotates in one with the release lever section and canceled engagement on the main part of a printer, it can be made in agreement in the direction in which roll-sheet covering opens the direction to which the release lever section moves.
[0014]
[Embodiments of the Invention] Hereafter, the gestalt of desirable operation of the printer concerning this invention is explained in detail with reference to a drawing.
[0015] Drawing 1 is the perspective diagram showing the outline composition in the state where roll-sheet covering closed about the appearance of the printer of the gestalt of this operation. Drawing 2 is the perspective diagram showing the outline composition in the state where roll-sheet covering opened about the appearance of this printer. Drawing 3 is the side elevation showing the internal configuration in the state where roll-sheet covering of this printer opened. Drawing 4 is the perspective diagram showing roll-sheet covering of the gestalt of this operation, and the outline composition of a release lever mechanism.
[0016] The side elevation in which the side elevation in which drawing 5 (a) shows the outline composition of this roll-sheet covering, and drawing 5 (b) show the outline composition of this release lever mechanism, and drawing 5 (c) are the side elevations showing a part of this roll-sheet covering and outline composition of a release lever mechanism. Drawing 6 (a) and (b) are drawings for explaining an operation of this roll-sheet covering and a release lever mechanism.

[0017] As shown in drawing 1 and drawing 2 , the printer 1 of the gestalt of this operation has the main part case (some main parts of a printer) 2 where it has opening, and the roll-sheet covering 3 of the size which plugs up the opening.

The main part case 2 and the roll-sheet covering 3 are formed in a configuration which turns into abbreviation box-like in one using the resin, respectively. That is, while the main part case 2 is formed in the shape of an abbreviation rectangular parallelepiped from a rectangle-like pars basilaris ossis occipitalis and the wall prepared so that this pars basilaris ossis occipitalis might be surrounded, the roll-sheet covering 3 is formed in plate-like [rectangular].

[0018] The printer 1 of the gestalt of this operation here can choose every length and one installation mode of every width, and the printer 1 of drawing 1 shows the thing in the state where it carried out every width. And set a printer 1 to the 1st pars-basilaris-ossis-occipitalis 2a at the time of carrying out every width, and the pars basilaris ossis occipitalis of the main part case 2 mentioned above is set in this state. The wall by the side of the front of the main part case 2 (method side of the diagonal below of drawing 1) is set to front section 2b among the walls of the main part case 2, and the wall by the side of the back of the main part case 2 is set to the 2nd pars-basilaris-ossis-occipitalis 2c at the time of carrying out a printer 1 every length. Furthermore, in this state, the wall of the bottom which makes the same field as the roll-sheet covering 3 closed by being connected from front section 2b of the main part case 2 is made into 2d of panel sections, and the wall on the right-hand side of the main part case 2 (slanting upper part right-hand side of drawing 1) is set to 1st side-attachment-wall section 2e, and let the wall on the left-hand side of the main part case 2 be 2f of 2nd side-attachment-wall section. In the following publications, it considers as the vertical direction and cross direction of a printer 1 on the basis of the case where 1st pars-basilaris-ossis-occipitalis 2a of the main part case 2 is turned down.

[0019] As shown in drawing 2 or drawing 3 , the roll-sheet electrode holder 4 which can hold a roll sheet (not shown) is formed in the interior of the main part case 2. The roll-sheet electrode holder 4 is formed in abbreviation box-like from plate-like flank 4b of a couple on both sides of curved-surface-like pars-basilaris-ossis-occipitalis 4a and its pars-basilaris-ossis-occipitalis 4a.

[0020] As shown in drawing 4 , bearing 3a is formed in a part for the both ends by the side of 2nd [of the main part case 2] pars-basilaris-ossis-occipitalis 2c among the periphery portions of the roll-sheet covering 3, respectively. And bearing 3a of the roll-sheet covering 3 is the both sides, and constitutes the hinge 5 of the roll-sheet covering 3 with bearing by the side of the roll-sheet electrode holder 4 which is not illustrated and the main part case 2. Thereby, the roll-sheet covering 3 is supported by the main part case 2 free [opening and closing].

[0021] As shown in drawing 3 , the thermal head 11 which prints with a sensible-heat method is formed in the part between front section 2b of the main

part case 2, and the roll-sheet electrode holder 4 among the portions within the main part case 2. On the other hand, inside [for a point] the roll-sheet covering 3, the platen roller 12 is formed free [rotation]. And when the roll-sheet covering 3 is closed, the printing mechanism 13 which consists of a thermal head 11 and a platen roller 12 is constituted so that it may rotate, while a platen roller 12 contacts a thermal head 11.

[0022] The movable edge unit 15 which has the movable edge which is not illustrated is formed in the upper part part near the thermal head 11 among the portions of the main part case 2 inside. On the other hand, inside [for a point] the roll-sheet covering 3, the stationary knife 16 is formed, and when the roll-sheet covering 3 is closed, the auto-cutter style 17 which consists of a movable edge unit 15 and a stationary knife 16 is constituted so that a movable edge may slide on a stationary-knife 16 top.

[0023] As shown in drawing 1 or drawing 3 , the 1st notch 18 for paper eccrisis is formed in a part for the nose-of-cam marginal part of 2d of panel sections of the main part case 2. On the other hand, the 2nd notch 19 for paper eccrisis is formed in a part for the nose-of-cam marginal part of the roll-sheet covering 3. And when the roll-sheet covering 3 is closed, the paper exhaust port 20 is formed in one from the 1st notch 18 for paper eccrisis, and the 2nd notch 19 for paper eccrisis, and this paper exhaust port 20 is pulled out from the roll sheet in the roll-sheet electrode holder 4, and it is arranged so that the recording paper which goes via a printing mechanism 13 and the auto-cutter style 17 can be discharged.

[0024] On the other hand, as shown in drawing 3 , the release lever mechanism 30 is formed inside [for a point] the roll-sheet covering 3. In addition, in the gestalt of this operation, the release lever mechanism 30 is unit-ized with the platen roller 12 and stationary knife 16 which were mentioned above.

[0025] As shown in drawing 4 or drawing 5 (b), the release lever mechanism 30 has the frame 31 formed in the shape of an abbreviation rectangular parallelepiped. The lever pivot 32 is supported free [rotation] by this frame 31, after the amount of point has overflowed the both-sides section of a frame 31. This lever pivot 32 is arranged so that it may become the direction of the axis of rotation of the hinge 5 of the roll-sheet covering 3, and parallel. The engagement presser foot stitch tongues 33 and 34 are formed in the portion which overflowed the frame 31 of the lever pivot 32, respectively. These engagement presser foot stitch tongues 33 and 34 are formed in the shape of ****, and they are parts for the abbreviation center section, and they are being fixed to the lever pivot 32 so that each engagement presser foot stitch tongues 33 and 34 may maintain the same posture.

[0026] As shown in drawing 5 (b) and (c), it is under surface (main part case side) than the lever pivot 32 among the portions of each engagement presser foot stitch tongues 33 and 34, and the hook section 35 of a predetermined configuration is formed in the configuration in which the part 42 by the side of the main part case 2 and engagement are possible at the portion by the side of the hinge 5 of the roll-sheet covering 3.
[0027] Moreover, near the hook section 35 of each engagement presser foot stitch tongues 33 and 34, the attachment section 36 is formed and the extension spring 37 is attached between this attachment section 36 and frame 31.
[0028] Furthermore, as shown in drawing 4 , the release lever 38 is being fixed to the engagement presser foot stitch tongue 34 of one side (near side of drawing 4) among these engagement presser foot stitch tongues 33 and 34. This release lever 38 is formed in the shape of an abbreviation block in a predetermined size, and is arranged on both sides of the lever pivot 32 at a part for the edge of the hook section 35 and an opposite side.
[0029] The knob section 39 is prolonged and formed in the direction which overflows a part for this soma of a release lever 38 a little among the upper parts of a release lever 38 at the portion by the side of the nose of cam of the roll-sheet covering 3. Moreover, it is formed in the upper surface of a release lever 38 so that the impression section 40 of the shape of a predetermined concave curved surface may gather and it may be connected with the section 39.
[0030] on the other hand -- the side of the 2nd notch 19 for paper eccrisis of the roll-sheet covering 3 -- the portion by the side of 1st [of the main part case 2 among portions] side-attachment-wall section 2e -- the object for levers -- the hole (crevice) 41 is formed in the larger size a little than the appearance of a release lever 38 this object for levers -- convex-surface-like convex knob section 3b is formed in the portion by the side of 2nd [of the main part case 2] pars-basilaris-ossis-occipitalis 2c among the periphery portions of a hole
[0031] This release lever mechanism 30 and by attaching the frame 31 inside the 2nd notch 19 for paper eccrisis of the roll-sheet covering 3 a release lever 38 -- the object for the levers of the roll-sheet covering 3, as it is arranged at a hole 41 and shown in drawing 5 (c) in this case a part of top containing the knob section 39 and the impression section 40 of a release lever 38 -- the object for the levers of the roll-sheet covering 3 -- it exposes and becomes depressed from a hole 41, and the section 40 approaches with convex knob section 3b
[0032] In the gestalt of this operation which has this composition In opening the roll-sheet covering 3 in the case of exchanging roll sheets etc. as shown in drawing 1 or drawing 6 (a) for example Since convex knob section 3b of the

roll-sheet covering 3 has projected while the knob section 39 of a release lever 38 is exposed from the roll-sheet covering 3, The knob section 39 of a release lever 38 is gathered by attaching a finger to the knob section 39 of a release lever 38, or attaching the finger of further others to convex knob section 3b of the impression section 40 of a release lever 38, or the roll-sheet covering 3 in this state from the direction of either of the arrows A, B, and C shown in drawing.

[0033] And if the knob section 39 of a release lever 38 is rotated in the direction of arrow D focusing on the lever pivot 32 as shown in drawing 6 (b) Since engagement to the hook section 35 of the engagement presser foot stitch tongues 33 and 34 and the part 42 by the side of the main part case 2 is canceled when the engagement presser foot stitch tongues 33 and 34 move in one with a release lever 38, as it is, the knob section 39 of a release lever 38 is moved in the direction of arrow D, and the roll-sheet covering 3 is opened focusing on a hinge 5. In this case, the force applied to a release lever 38 is transmitted to direct roll-sheet covering 3 the very thing as the moment required to open the roll-sheet covering 3, and is not transmitted to the main part case 2 side.

[0034] Since it changed into the state of opening the roll-sheet covering 3 only by moving a release lever 38 to the hinge 5 side of the roll-sheet covering 3 according to the gestalt of this operation as stated above, by continuing operation of a release lever 38 as it is Furthermore, since the force which a release lever 38 operates moreover is not transmitted to the main part case 2 side, in case it can open the roll-sheet covering 3 easily, without needing the excessive force in case the roll-sheet covering 3 is opened, and the roll-sheet covering 3 is opened, it can prevent that printer 1 the very thing moves.

[0035] Especially, according to the gestalt of this operation, it enables it to hold the knob section 39 of a release lever 38 from any direction, and since the direction to which the knob section 39 moves, and the direction which the roll-sheet covering 3 opens were made in agreement, even if printers 1 are every width and which installation mode of every length, the roll-sheet covering 3 can be opened smoothly.

[0036] For example, if it is when a printer 1 is carried out every width and the front section 2b is made into an operator's transverse-plane side, as shown in drawing 1 , the roll-sheet covering 3 can be opened only by attaching arrow C to an index finger for arrow A to the thumb to convex knob section 3b of the knob section 39 of a release lever 38, or the roll-sheet covering 3, lengthening to a back side, and raising the knob section 39 of a release lever 38 as it is.

[0037] Moreover, if it is when a printer 1 is carried out every length and the roll-sheet covering 3 and 2d of panel sections are made into an operator's transverse-plane side From B an index finger into the top portion of the knob

section 39 of a release lever 38 [Arrow A or] The self-weight of the roll-sheet covering 3 can open the roll-sheet covering 3 after that only by attaching the thumb to convex knob section 3b of the bottom portion of the knob section 39 of a release lever 38, or the roll-sheet covering 3 from arrow C, respectively, and lengthening to the down side.

[0038] In addition, this invention can make various change, without being restricted to the gestalt of above-mentioned operation.

[0039] For example, although the mechanism in which rotation of the engagement presser foot stitch tongues 33 and 34 united with the release lever 38 canceled the engagement by the side of the main part case 2 was used for the release lever mechanism 30 in the gestalt of the above-mentioned implementation, this invention can also apply other mechanisms, if it doubles in the direction in which the roll-sheet covering 3 opens the direction to which it is not restricted to this but a release lever 38 moves. But like the gestalt of the above-mentioned implementation, in depending the breaker style of the roll-sheet covering 3 on a rotary system, there is an advantage of being easy to double in the direction in which roll-sheet covering opens the direction to which a release lever moves, by depending the release lever mechanism 30 on a rotary system.

[0040] Moreover, in the gestalt of the above-mentioned implementation, although what is depended on a thermal head 11 as a printing method was used, this invention is not restricted to this but what is depended on a dot impact method or an ink-jet method can also be used for it. However, it is desirable to use a thermal head 11 from a viewpoint of enabling every length and installation of a printer 1 to all of every width.

[Translation done.]

* NOTICES *

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the perspective diagram showing the outline composition in the state where roll-sheet covering closed about the appearance of the printer of the gestalt of this operation.

[Drawing 2] It is the perspective diagram showing the outline composition in the state where roll-sheet covering opened about the appearance of this printer.

[Drawing 3] It is the side elevation showing the internal configuration in the state where roll-sheet covering of this printer opened.

[Drawing 4] It is the perspective diagram showing roll-sheet covering of the gestalt of this operation, and the outline composition of a release lever mechanism.

[Drawing 5] (a): It is the side elevation showing the outline composition of this roll-sheet covering.
(b): It is the side elevation showing the outline composition of this release lever mechanism.
(c): It is the side elevation showing a part of this roll-sheet covering and outline composition of a release lever mechanism.

[Drawing 6] (a), (b): It is drawing for explaining an operation of this roll-sheet covering and a release lever mechanism.

[Description of Notations]
2 Main Part Case (Some Main Parts of Printer)
3 Roll-Sheet Covering
4 Roll-Sheet Electrode Holder
30 Release Lever Mechanism
33 34 Engagement presser foot stitch tongue
38 Release Lever

39 Knob Section
41 Object for Levers -- Hole (Crevice)

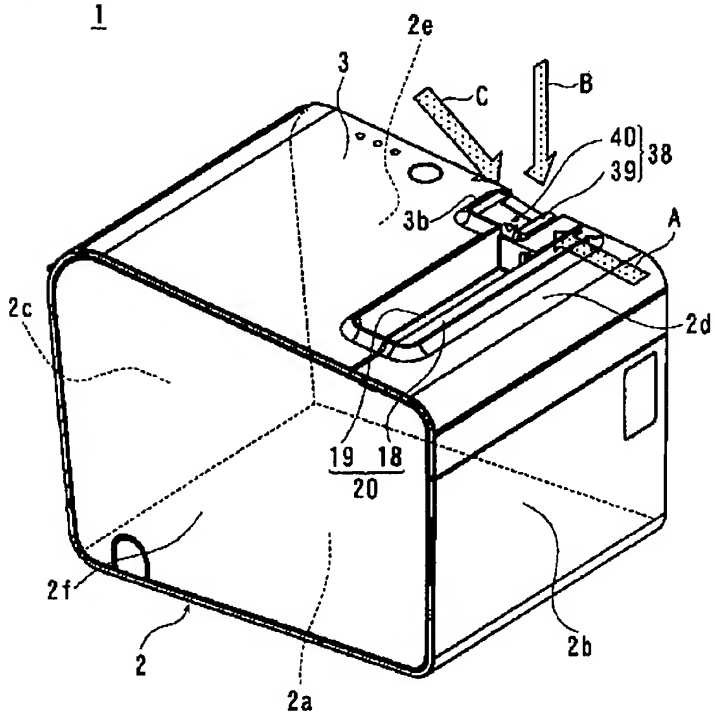
[Translation done.]

* NOTICES *

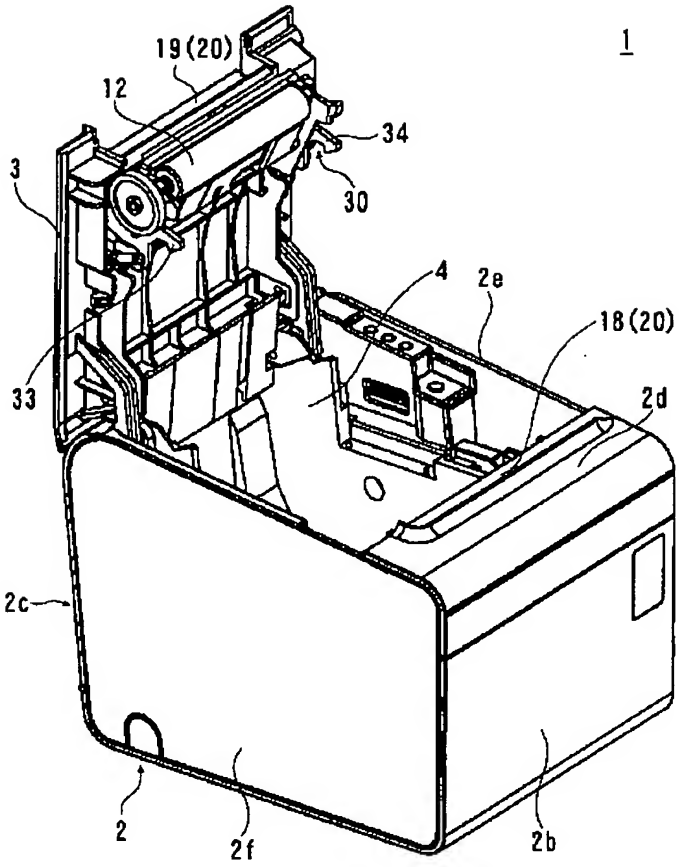
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

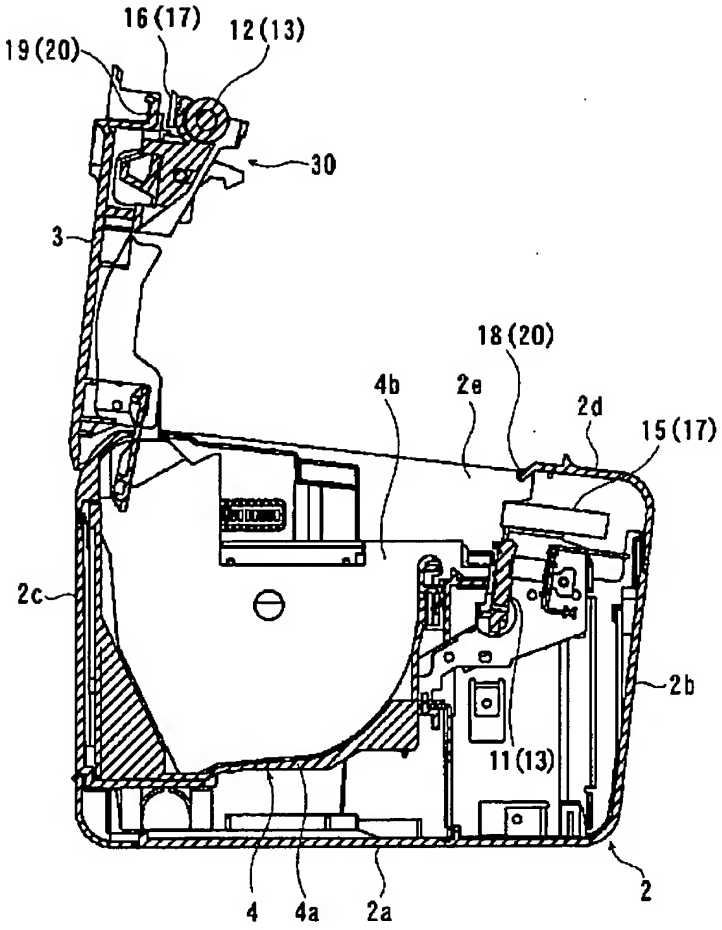
[Drawing 1]



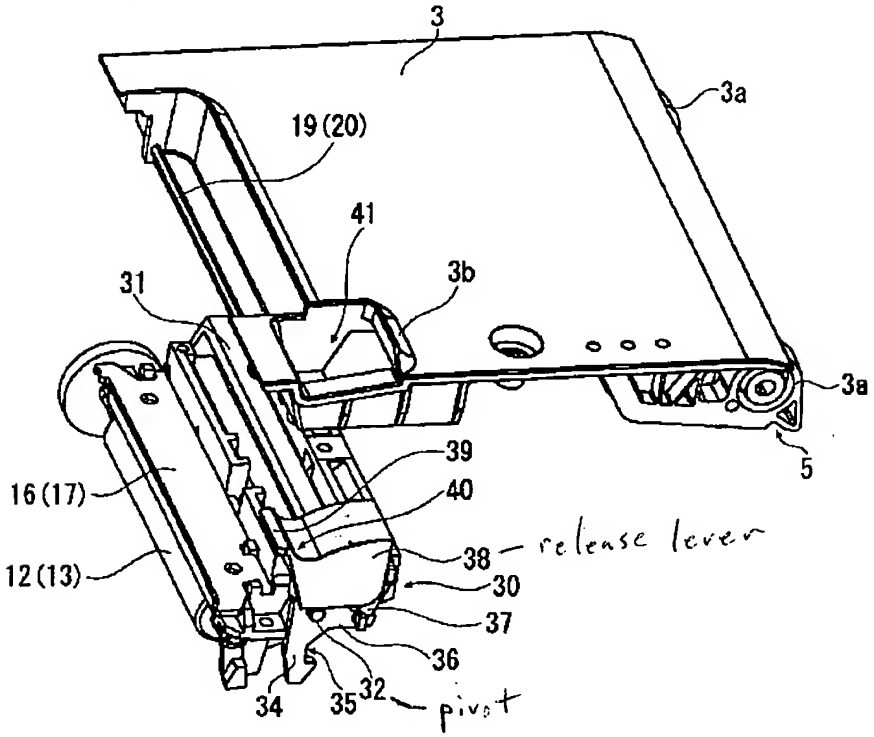
[Drawing 2]



[Drawing 3]

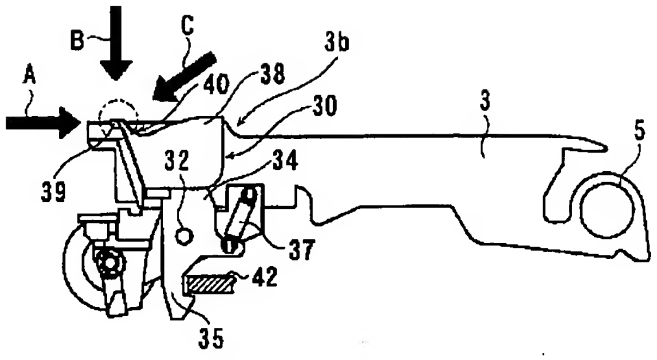

16(17)
12(13)
19(20)
30
3
18(20)
4b
2e
2d
15(17)
2c
2b
11(13)
4
4a
2a
2

[Drawing 4]

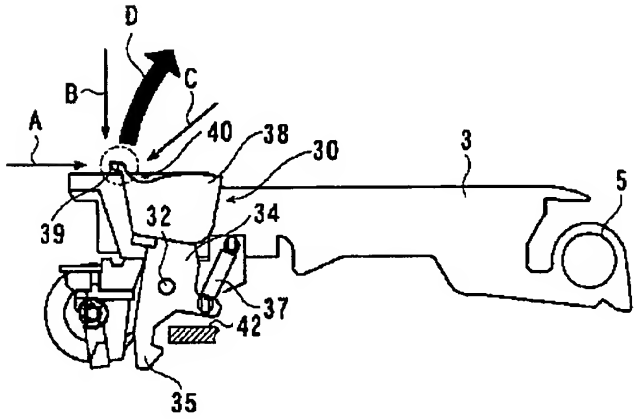

3
3a
19(20)
41
31
3b
3a
5
39
16(17)
40
38
release lever
12(13)
30
37
36
34
35
32
pivot

[Drawing 6]

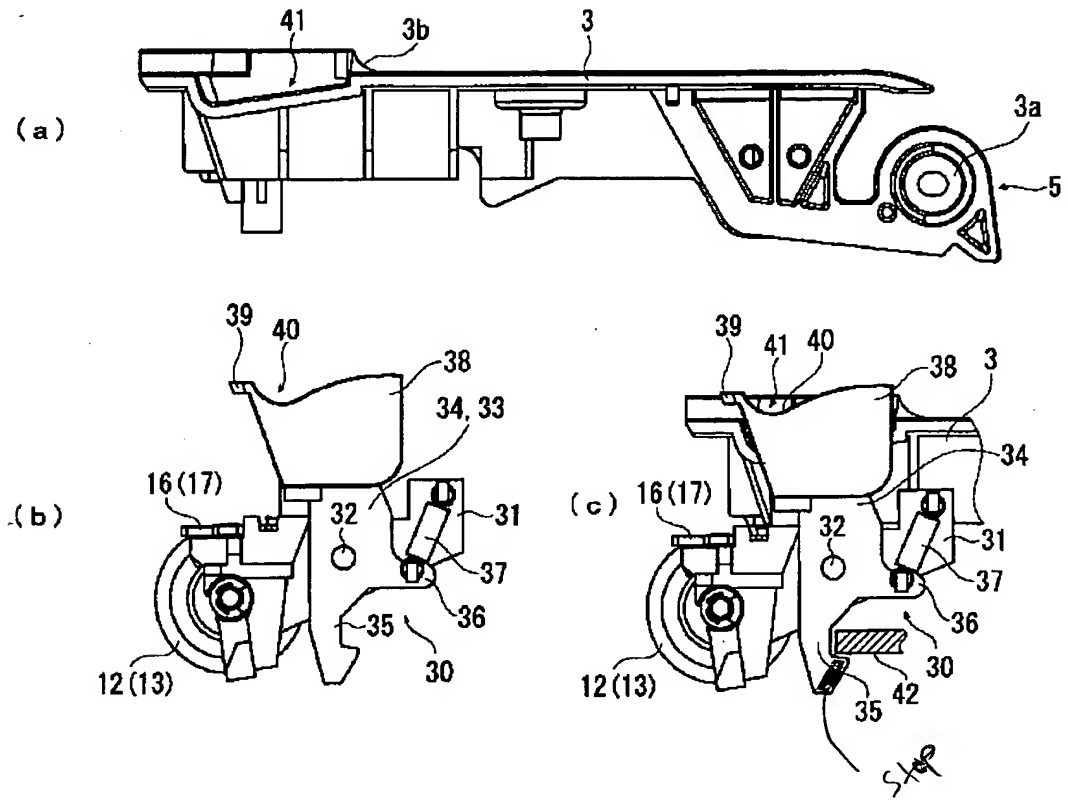
(a)



(b)



[Drawing 5]



[Translation done.]